THE VETERINARY RECORD

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888

No. 24. JUNE 13, 1953 VOL. 65.

HILL RECLAMATION: ASPECTS OF MANAGEMENT IN RELATION TO METABOLIC DISORDERS OF SHEEP

BY

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An altered national economy focuses attention upon the necessity for increased food production if a reasonable level of subsistence is to be maintained. Hill and marginal areas remain potential sources of increased supply, for which purpose the Marginal Production Scheme 1948 (in force in some modified form since 1943) and the Hill Farming Act, 1946, as amended by the Stock Rearing Act, 1950, afford financial assistance in the work of reclamation: to render fit and habitable dilapidated and derelict buildings, to reclaim and establish better intake pastures or enclosures.

A brief reference might be made to the importance of good intake pastures (in bye land or ffridd) in relation to the general economy of hill grazings, and the sequence of events in the past that have contributed toward their deterioration. Hill grazings are established on thin soils, at elevations (generally above 1,500 feet) where high annual rainfall leaches the limited plant nutrients of an impoverished soil. At the lower reaches the soil may be deeper, and this together with greater clemency is reflected in an improved herbage (Fescue-Agrostis). Here the intakes are established, many of which, in years past, were at some time under cultivation. They function as areas for improving store lambs, for the wintering of ewe lambs together with weaker sheep from the hill flock. The better swards provide nutrition during the period of greatest stress, February to April, when very little food is available on the hill proper.

Lambing may take place within the enclosures, and at tupping time the breeding flock may be brought in. The ratio of intake and lower enclosures to hill land thus determines the winter carrying capacity, which is the critical factor, not that of the summer period when a more plentiful food supply allows more stock to be carried.

That many of the intakes have reverted and become just part of the hill is the result of a long sequence of events. Towards the end of the nineteenth century a change over from wheat and wool to milk and beef led to a reduction in arable acreage on the lowlands, and this in time resulted in a corresponding increase in permanent pasture. Cattle were withdrawn from the hills, and wethers replaced by breeding ewes, as the wether lambs could be fattened more profitably on the increased acreage of lowland pastures. The gradual drift of rural workers to industrial towns left less labour available for fencing, draining and manuring of the more inaccessible intake pastures. Alteration in the composition of stock grading the hills resulted in the coarse and shorter lived grasses becoming dominant, smothering other species. Ranching of intakes rather than rotational grazing led to further deterioration and the general neglect was followed by the colonisation of gorse, bracken and heather, and further invasion of hill species.

The methods of establishing better intake pastures are: (i) Plough and reseed directly or (as is now more common) after a pioneer crop of rape has been sown and grazed; (ii) The corrective manurial dressing alone of the indigenous sward may be undertaken. Hill soils usually reveal a very low lime and phosphate status, with potash satisfactory or even high; (iii) Cattle may be grazed during the more favourable periods of growth, and by eating down the coarse herbage, assist in the gradual improvement of the grazing.

Normally these improved pastures are grazed by cattle in summer, and stocked with sheep in winter.

Following upon the improvement of some intake pastures it became evident that further attention should be paid to methods of management in order to cut down loss from diseases such as milk fever (pre- and post-parturient eclampsia), the incidence of which is shown in the table.

This field trial is of some interest in the control of grazing in relation to metabolic disorders. The brief histories of both flocks are tabulated:

Year	Number of cases of milk fever	
	Flock A	Flock B
1948	Nil	Nil
1949	43	Nil
1950	21	72
1951	10	Nil
1952	Nil	Nil

The cases recorded in Flock A during April, 1949, followed after the movement of the sheep from hill grazings to the intakes, some of which had been improved by direct reseeding during 1948, and others top dressed with lime alone during this period. This flock had been restricted to the hill grazings throughout the winter period, whilst Flock B was allowed access to its own intake pastures during this time.

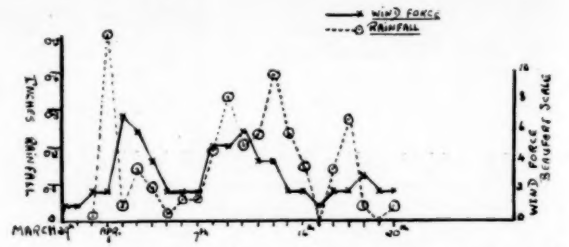
During 1949 areas of intake on both farms were top dressed with rock phosphate. Throughout the winter of 1949-50 both flocks remained on their respective hill grazings until the end of March, 1950, when they were shepherded on to the enclosures in preparation for lambing. A small group of 75 ewes from Flock A had access to the hill and to improved intakes in this period, and these were placed as a separate lot upon improved enclosures. As each flock was brought down a small group was shed on to intake pastures that had not been treated; 81 ewes from Flock A and 70 ewes from Flock B respectively. Thus both flocks contained a group of sheep moved from hill to improved intakes, and another smaller lot shed on to unimproved enclosures; a third group from Flock A (the group that throughout winter grazed hill and improved sward) was enclosed on improved intakes.

The cases recorded among these groups were:

Year 1950	Flock A		Flock B		Total in group	Total cases
	No. in group	No. of cases milk fever	No. in group	No. of cases milk fever		
Access to intake and hill during winter	75	—	—	—	75	Nil
Moved from hill to unimproved intake	81	—	70	1	151	1
Moved from hill to improved intake	295	21 (7 died)	232	78 (13 died)	527	99

The blood samples examined revealed hypocalcaemia. Response to calcium therapy (60 c.c. calcium borogluconate subcutaneously) was good. Deaths in Flock A during this period numbered seven, those in Flock B 13—the latter included seven ewes that relapsed and did not respond to treatment the second time.

Number of cases	Flock A	Flock B	Total
Before lambing	15	34	49
After ,, ...	6	45	51



Meteorological data, rainfall recorded locally: wind force recorded 15 miles away at lower elevation.

After lambing, the return to hill grazings proved uneventful in Flock A, but later more than 20 dead ewes were found on the hill of Flock B. The cause of death was not ascertained; dense growth of heather made it difficult to detect the carcases reasonably early.

During the two following winter seasons (1950-51; 1951-52) both flocks were regularly shepherded from the hill on to the intakes for short intervals; they were again enclosed in preparation for the lambing season, at the end of March, each year.

Apart from one particular small group of ewes, no case of metabolic disorder was detected either season. This group, consisting of 18 ewes from Flock A, were sheep in poor bodily condition culled from the main flock early in March, 1951, and placed on an intake reseeded in

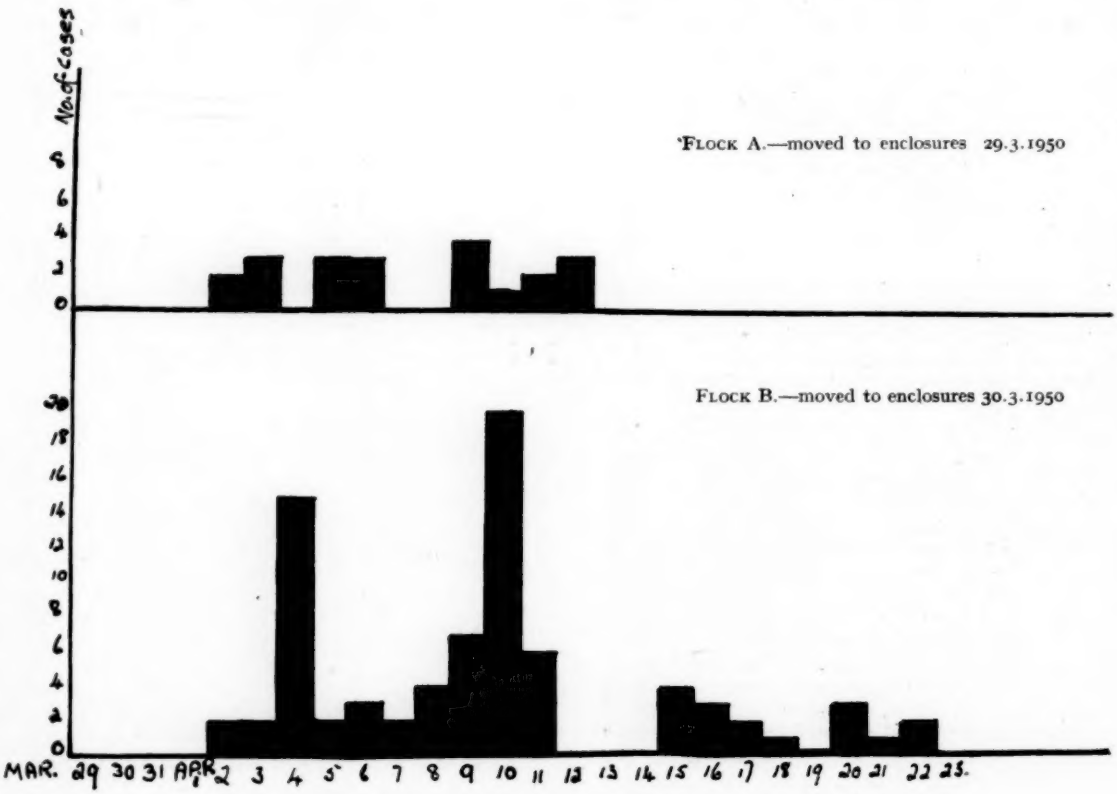

No. of cases
FLOCK A.—moved to enclosures 29.3.1950
FLOCK B.—moved to enclosures 30.3.1950
MAR. 29 30 31 APR. 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 25.

Chart showing number of clinical cases (Hypocalcaemia) recorded daily.

1950. The sward had been rested throughout the winter and was not used along with the older intakes. Growth was sparse but exceptionally green. Fourteen days elapsed before the first of a total of 10 clinical cases of pre-parturient eclampsia occurred.

Discussion

The classical and traditional method of shepherding from the higher grazings on to better pastures is one of gradation, whereby the animals are first placed on the intakes or "ffridd," to remain for a period, after which they are taken to the lower enclosures or fields. The intakes are again used as an intermediary stage during the movement from the lower areas to the hill grazings. In this way sudden change in diet is avoided. Better than that of the hill proper, and yet not as good as the lower enclosures or fields, the indigenous herbage of the intake allows the animal to adjust itself from one extreme to the other. Present-day research directed upon the influence of diet upon ruminal flora is a further step forward in the elucidation of a problem of great importance; the practical implications have been appreciated by good flockmasters and shepherds for generations.

Improvements effected by present-day methods provide a more marked contrast with the indigenous hill and moorland herbage than in the past, when sown clovers, for example, were rarely established within such enclosures. Mechanisation and the greater use of artificial manures have made it possible to establish, at considerable altitudes, swards that in composition and nutritive value compare favourably with those of the lowlands. Thus the movement from hill to intake under these conditions is to some extent the equivalent of direct movement from hill to lowland.

The general floristic patterns of hill grazings have been grouped as Fescue Pastures; Molinia-Nardus; Cotton and Deergrass; Heather Moor; each with its own botanical associations. From this type of grazing, the animal on its way down entered the fescue agrostis association of the intakes before finally proceeding to the lowland swards at which stage the clovers, if any, were established. Now a sward containing rye-grass and clover may be established temporarily on the intake.

Movement between hill and intake throughout winter appears to assist acclimatisation, and avoids a sudden change of diet towards the end of pregnancy. Again the result of such grazing is to reduce the quantity of herbage when sheep are eventually enclosed upon these pastures for lambing.

The combination of wind and rain is one that tries this animal rather more than any other kind of weather: under such conditions it instinctively seeks shelter. With inadequate shelter the stress to which the animal is exposed during inclement periods is obviously greater. More natural shelter can frequently be found among the vast open hills than on smaller enclosed areas lower down. Reference to the chart shows that the first peak for Flock B follows soon after a period of high wind and rain—in fact the wind velocity was comparatively higher, as the readings were recorded 1,200 feet lower than the intakes. The second peak builds up with the following stormy period. The first post-partum clinical case of milk fever in Flock A occurred 10.4.50 and in Flock B 9.4.50. Thus the first peak was not associated with the number of ewes lambing down. The record of lambs born daily is not available, but there was no obvious increase of daily births in Flock B when compared with Flock A to account for the higher incidence of the second peak.

The enclosures of Flock A are placed at an elevation of approximately 1,250 feet, and those of the other flock range up to 1,400 feet. Such are the topographical conditions, that the enclosures of this latter flock are more exposed and lack the shelter of the other intakes, especially with a wind direction between North and South-West. Again, after periods of heavy rainfall these intakes of Flock B remain more sodden under foot than those of Flock A. Under the conditions that prevailed it is possible that this slight difference of shelter contributed to the greater number of cases in Flock B.

Allcroft (1947) has recorded the influence of climate upon the serum magnesium levels, and the incidence of clinical hypomagnesaemia in the bovine.

The result of improved intakes, properly managed, upon the productivity of both these flocks is outside the scope of this article. It is spectacular.

Summary

Some care in flock management is suggested when intake pastures are improved, so that sudden change of diet is avoided at lambing time. Throughout pregnancy some form of rotational grazing is recommended. Where the necessary conditions for metabolic disorders are present, there is some indication that inclement periods and exposure, or lack of shelter, tend to precipitate further cases.

Acknowledgements.—Acknowledgement is made to Captain J. O. Burton, Broad Leys, Denbigh, whose co-operation made possible these field observations: to both his shepherds, Thomas Williams and Tecwyn Jones: to Sir Thomas Dalling for his interest throughout: to Messrs. Pritchard & Davies, of Denbigh, for advising as to the treatment of clinical cases: to the Biochemical Department, Weybridge, for examination of blood samples, and to Rhyl and Birkenhead Corporations for meteorological data.

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Ministry's Exhibit at the Bath and West.—Included in the Ministry of Agriculture's exhibit at the Bath and West Show, held at Bath from June 3rd to 6th, were two effective sections dealing with the health of our stock. That on foot-and-mouth disease showed some of the effects of this disease: slobbering and lameness due to blisters, and raw places in the mouth and on the feet. It illustrated how the virus can be brought into this country on imported carcases and bones, and how this may be minimised by boiling all raw swill. There was reference to the carrying of the disease into the country by birds, especially starlings, which bring it to Britain from coastal areas of the Continent when the disease is rampant there in the migration season. After referring to the possibilities of vaccination, the arguments were put forward for the maintenance of the slaughter policy in this country.

The other section was concerned with stomach worms and their effects on sheep. It portrayed in some detail an experiment carried out at the Ministry's Veterinary Laboratory at Weybridge, Surrey, which resulted in sheep infected with stomach worms showing a loss of 40 lb. in a year, compared with similar worm-free sheep kept under comparable conditions.

SOME ASPECTS OF EAR DISEASE IN THE DOG*

BY

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I do not propose to try to cover the whole field of ear disease in the dog, which in the time available would be only a very sketchy review, but rather to concentrate in more detail on four aspects, namely, ear cleaning, parasitic otitis, foreign bodies and middle ear disease.

Ear Cleaning

At the International Congress in London in 1949, Dr. Zepp presented a paper on diseases of the dog's ear and both he and Professor Formston in his opening very rightly laid particular emphasis on the need for the utmost delicacy in handling the external ear canal. The dog owner is frequently himself the causal factor, or at least responsible for the continuance, of ear trouble in his dog by his insistence on cleaning out the ear with such "soothing" dressings as peroxide, methylated or surgical spirit, and I fear that the practitioner who then treats the case is sometimes partly to blame by his own methods of treatment, using more appropriate dressings but still with the aid of the dressing forceps and cotton wool. I feel that the first stage in the successful treatment of the ear is to throw the forceps away. If we consider for one moment the anatomy of the external ear, its length and curvature, and the narrowness of the portion contained in the annular cartilage and the osseous canal, we must realise that no attempt at mechanical cleaning by such methods can ever hope to reach the source of the trouble. It can only damage or irritate an already inflamed and very sensitive integument while leaving the deeper parts of the canal untouched, and even pushing debris farther down into the osseous portion of the canal. Surely it is for this reason that we find such a plethora of lotions, powders, ointments and creams used, advertised or prescribed. Surely, again, this is the reason why ear cases pass on from veterinary surgeon to veterinary surgeon probably more frequently than any other type of case in dog practice.

Once we have made up our minds never so to misuse the integument of the ear, we are more than half way to persistent success in the treatment of ear conditions. The only way to clean out a dirty and inaccessible cavity is to wash it out. Soap and water or preferably one of the modern detergents such as cetrimide (cetavlon) are always available and easy to apply. I always use cetavlon in ½ to 1 per cent. solution in tepid water. It is non-irritating, cleans out all wax, debris and discharges thoroughly and completely, and can be applied in various ways. I think that the most useful are the Sparklet dental spray and the douche. With the dental spray, the minimum of pressure can be released from the bulb into the container, and one filling will clean the dirtiest ear. It is an education to see the amount of dirt and debris that is washed out of the ear on the mass of froth produced. While the spray is easy, ready to hand, and transportable, it cannot be used with a very sensitive patient because of the noise produced in the ear. In such cases one should use a douche with the same solution of cetavlon. It is not so convenient, and is much slower as it requires from half to one pint to flush the ear canal sufficiently to secure complete cleansing, but the gentle gravity feed is not resented. After such initial treatment we have an external ear canal that is clean right down to the drum and we can then apply the medicament of choice, and moreover it is the only way in which we can secure a proper auriscopic examination in a diseased ear.

Parasitic Otitis

I have included this in my remarks because I feel that it may not be generally recognised what a high percentage of our ear cases are parasitic, or have been so in their inception. I only came to realise this after reading the report by Kaufmann & Frost (*Vet. Record.* **61.** No. 26, 1949) on a series of 50 consecutive cases presented for treatment. *Otodectes cynotis* was found in 56 per cent. of these cases. More recent work by I.C.I. (not yet published) showed the presence of the parasite in over 90 per cent. of the inmates of a large Poodle kennel, a breed notorious for the incidence of ear disease. I now make a point of instilling a few drops of a suitable acaricide into the ears of all Poodle puppies presented for inoculation or other reason. The particular choice has been benzene hexachloride in a suitable penetrating base (lorexane 0·1 per cent. ear lotion, I.C.I.).

Foreign Bodies and Auriscopic Examination

If one asks any veterinary surgeon whether it is possible to see the tympanum in an unaesthetised dog, the answer will usually be "No." The reason for this mistaken belief lies in the design of the speculum. The human speculum which we use is quite inadequate. The length and convolution of the external ear canal requires a speculum nearly twice as long. The type which I have here is far from ideal, but it is obtainable "off the shelf." The external diameter of the speculum in the middle of its length might well be reduced from 14 to 8 mm., but the length is correct. The American type of auriscope is preferable as the handle is cranked, and the speculum is made of bakelite or plastic material—the absence of reflection produces a clearer field at the end of the tube. With a normal ear or an ear properly cleaned it is possible to see a portion of the tympanum in most dogs.

Every July and August the urban practitioner is faced with the removal of grass awns from the ear canal. The awn responsible is that of the wall barley, which grows only on poor or dried-up and hard-trodden ground. It flourishes therefore in town parks and commons but is not seen in normal grassland. In America, where it is even a greater nuisance than here, it is known as foxtail. Any history of sudden and acute pain in one ear in the late summer is almost diagnostic. The removal of the awn through the long speculum, with the aid of crocodile forceps, is easy and may usually be accomplished quite readily—and in the presence of the owner—without an anaesthetic. For the nervous dog the instillation of 2 per cent. butyn or a few drops of tycin will produce sufficient desensitisation to allow painless removal. One should always examine the ear again with the speculum after the removal of an awn, as frequently there are more than one present. Here is such an example removed from a Spaniel's ear this summer, and it does show just how much can get packed into the ear canal without showing any trace to direct examination. The presence of an awn inspissated in wax is sometimes the cause of that intractable "canker" we usually see in Spaniels, and it can be seen only after proper cleaning of the ear.

Light pentothal anaesthesia is a great help in the proper examination of a painful or occluded ear. Where the absence of a trained assistant or lack of time makes such intravenous anaesthesia impracticable, I have found the use of a new analgesic drug thiambutene (themalon, Burroughs Wellcome) most helpful. It may be given subcutaneously at any time, and the dog is then ready for examination from one to four hours later.

* Presented to the Central Veterinary Society, October, 1952.

Middle Ear Disease

It is not usually possible to see sufficient of the tympanum to be sure of a direct diagnosis of perforated drum, the perforation being usually close to the floor of the osseous portion of the ear canal. Dr. Zepp, in his paper to which I have referred previously, describes a simple and diagnostic test. While viewing the depths of the external ear canal with the speculum, an assistant makes the dog swallow by pressure on the larynx. Bubbles will appear through the perforated tympanum. Another useful indication is that pain will be evinced if pressure is applied with the thumb to the osseous bulla. The persistence of a clear glutinous discharge after cleansing the canal and applying local treatment is strongly suggestive. In sporting breeds there is often a history of recurrent attacks of otitis after swimming, and in house dogs after bathing. All such cases should be treated both systemically and locally. Systemically I have found the most helpful treatment is a course of combined distaquaine penicillin and streptomycin, while a promising local treatment is the application of tycin drops to the external ear. Tycin combines the bacteriocidal action of tyrothricin with a long-acting local anaesthetic in a penetrating base. Such combined treatment will often clear up an otitis media, but the condition is recurrent. Failure with such treatment or too frequent recurrence are indications for aural resection. Other indications for surgery are those cases where local treatment is unlikely to be of any avail, such as chronic hyperplasia of the integument and cartilage, producing occlusion of the meatus and ulceration of the portions in contact, or verrucosity of the ear lining.

The techniques of aural resection have been fully described and will not be recounted here. Any details may well be ventilated in the subsequent discussion. But, in conclusion, may I put in my spoke for the general adoption of the modified operation—modified that is from the original conception by Formston & McCunn in 1931—by Dr. Zepp in his paper and coloured film which he presented in this College in 1949. Since that time very many of my cases have undergone this operation with completely successful results, and what is even more important, with no recurrence. There is no doubt in my own mind that the eversion and grafting of part of the cartilage and integument gives thorough and permanent drainage, with no possibility of subsequent closure. There is the least amount of cicatrisation and there can be no contact of hyperplastic cartilages to cause renewed ulceration.

DISCUSSION

Mr. Hodgman congratulated the speaker, particularly with regard to the method of cleaning the ear. The Americans had an even better type of speculum made of a soft rubber which caused very little damage to the organ.

Mr. Nye reported some cases of infection of the middle ear following hard pad, and Mr. Singleton observed that he had seen such cases frequently following acute tonsillitis.

Mr. Bruford agreed with so much in the paper, but wondered whether it was right to dismiss parasitic otitis quite so lightly. Many such cases were recurrent. Not only were otodectes responsible, but frequently he found evidence of fleas on the back of the ear and in the neck. Appropriate anti-parasitic treatment would assist very materially the treatment of the ear condition. He considered that the Kennel Club had aggravated ear trouble in Cocker Spaniels by encouraging great length of ear.

Mr. Mitchell doubted whether careful swabbing of the ear with cotton wool was likely to cause any damage. With regard to aural resection, he considered that it was not only drainage that was required, but in many cases the removal of some of the chronically inflamed tissues.

Mr. Singleton agreed that an incredible amount of damage could be done in attempting to clean an inflamed ear with cotton wool and he suggested that anybody who doubted this statement should examine such an ear with an auriscope before and after cleaning with cotton wool. With haematoma he favoured the " S "-shaped incision with through suturing with steel wire. This produced the minimum amount of deformity of the conchal cartilage on healing. For use with cats, he described the use of shaped steel plates which were introduced by the late Henry Gray. He found that if these were through sutured with steel wire after emptying the haematoma, he got good healing with no interference by the cat.

Mr. Francis criticised the use of Henry Gray plates as being liable to cause severe ear damage, but he agreed that this was probably due to the use of the original screwed nuts for fixing. He was interested in the speaker's reference to Burroughs Wellcome's analgesic themalon, and he would like to know more about the dosage and whether any antidote had been suggested.

Miss Fussell referred to cases of papillomata in the dog's ear which were removed without much trouble, but described a similar condition in the cat's ear which was most intractable.

Mr. Hodgman said that he still used gut sutures through the ear with a haematoma, and he made two incisions with a space between them. He considered that it was not the Kennel Club that was responsible for the encouragement of long ears in the Cocker Spaniel, but the breeders.

Miss Uvarov did not agree with the use of water or soap solutions in the ear ; she considered that the use of cotton wool soaked in an oily solution was not dangerous and was the method of choice in cleaning the ear. It was a question of practice and mobility of the wrist. She referred to a dry and irritable condition in some smooth-coated dogs, such as Boxers and Labradors, in which there was little secretion of wax. The use of calamine type lotions could be extremely irritating and such a condition required oily solutions. She found furacin to be of great benefit in some cases.

Professor McCunn was glad that the speaker had so simplified the whole question of ear treatment, but was sorry that he had not mentioned soda bicarbonate. When he was working in hospital a solution of soda bicarbonate was always used for cleaning wax from the ears. He stressed the intense irritation which could be caused by even the smallest piece of wax lying against the drum and he was sure that in those dogs which were constantly " snapping at flies," the real trouble was a small piece of wax causing vibration of the tympanum. The treatment of ears was not much different from the treatment of skin lesions, the only change being that of accessibility. In this lay the great value of Zepp's operation. It laid open the interior of the ear and made it accessible for treatment. It was not primarily a question of drainage. He commended the use of thyroid internally for those cases of dermatitis and dry conditions of the ear. There was no better stimulant to the skin and healing processes than thyroid.

Professor G. H. Wooldridge : Many would remember Henry Gray's assertion that nine-tenths of canine hysteria was due to ear trouble. The explanation might well be along the lines suggested, that the animal was frightened of imaginary objects. With regard to the Henry Gray plates for haematoma, he thought that it was the wrong use of them which caused the trouble. He then emphasised the necessity of cleaning the outside of the ear before any attempt was made to clean the inside. Many cases of external otitis were caused by owners pushing cotton wool and other things down into the ear when the dog showed signs of irritation instead of cleaning and teasing out the large quantities of matted hair outside. With regard to cotton wool, it was not the use that was the trouble, but the mis-use. When used properly they could go on from cleaning the outside little by little into the ear, constantly changing the wool. As to wax, he would refer them to the old treatment of betanaphthol (one part), ether (one part), olive oil (12 parts). The ether dissolved the betanaphthol and the wax, and the oil was a soothing application after the primary irritation caused by the ether and betanaphthol.

Professor Formston : He was in complete agreement with nearly all Mr. Woodrow had said, particularly from the point of view of cleaning. He was interested in Mr. Singleton's observation on the Henry Gray ear clamps. They had been well thought out, but as with so many other things, improvements had been made. Two of his colleagues had produced a plastic clamp which removed the one fault of the Gray clamp, namely, its weight. Mr. Singleton had overcome some of the difficulty by using suture wires in place of the screws, but the plastic clamp was cheap, light and flexible and they could cut it to shape and bore holes in it quite readily. He had also mentioned a type of otitis in which there was a black discharge. He found these cases occurring in such dogs as black Spaniels or black Poodles, *i.e.*, dogs with a melanotic background. Mention had been made of the bacterial flora in the ear, but they found little verification that these represented any causal factor. It was the collection of debris in the ear which was the main cause of the irritation, together with the high-power activity associated with the integument of the ear. The operation of aural resection put at rest the inflamed and lacerated parts of the ear. Whether they used Zepp's method or not, the operation must be thorough and the incision made right down to the annular ring. He thought that Miss Fussell had in mind a condition of polypus of the cat's ear. If they had the full history of the cat, they would probably find there had

been suppuration of the ear with the animal holding its head to one side, and this was relieved only when the middle ear had filled with pus and started to discharge. When there was little or no discharge, granulation tissue commenced to grow from the middle ear through the drum and out through the external canal.

Mr. Bywater recommended the use of industrial spirit rather than methylated : it was cheaper and was acetone free.

Mr. Young : He was surprised no one had mentioned oil for cleaning. He used it for three days and found that all the debris and wax came readily to the surface of the ear where it could easily be wiped away. He asked the speaker how long it took to clean the ear with the apparatus shown and whether it was essential to dry out the solution afterwards.

Mr. Halpin : He advised his clients, in an area where there was a lot of wall barley during the summer, to shave the inside of the ear flap and the side of the jaw whilst the grass season lasted. He found that by removing the ladder by which the seeds came they could reduce this trouble materially.

Mr. Wright commended Professor Wooldridge's description of the correct way of cleaning the dog's ear with instruments and cotton wool, but he regarded it as highly skilled and requiring considerable dexterity.

The Reply

Mr. Woodrow, in his reply, said that he would welcome the introduction of a new speculum similar to the American type. The whole secret of examination of the ear was to straighten the canal by drawing the cartilage back over the long speculum. He would not advise the plucking of hair from Poodles' ears as a routine measure but only where the hair was matted with excessive wax secretion. He thought that the majority of the cases of middle ear disease were by spread of infection from the throat up the Eustachian tube into the middle ear. Obviously tonsillitis was a likely cause of such infection, whether existing alone or as a complication with hard pad disease. Because of this they should be very thorough in the treatment of tonsillitis cases and continue for some days after the temperature had returned to normal.

He considered that one of the secrets of success in whatever type of operation was carried out for haematoma, lay in the use of stainless steel wire for suturing. This was quite non-irritating and dogs made no attempts at interference with the sutures.

Regarding the use of the new analgesic themalon, the dose was about 20 mg. per kg. The action was similar to that of morphia, but without the unpleasant side effects, such as vomition and salivation. There was a wide margin of safety, and he understood that both themalon and a suitable antidote would be commercially available in the near future.

Concerning the use of the dental spray, one filling would be quite sufficient to clean an ear, and he only released the very minimum amount of pressure into the container at one time. It was better to keep renewing the pressure from time to time during use, rather than to start with a high pressure. It would take some three or four minutes to clean an ear thoroughly. He did not attempt to mop out or dry the ear afterwards. The cetavlon was non-irritating and antiseptic and was better left in. He thought that the douche was particularly useful in the surgery or in the clinic as it was immediately available at any time. If the can was fixed high up, it had an excellent flushing effect and would clean the ear very well. He maintained that the method was simple, speedy and safe. It required no dexterity and was the only way of ensuring that the canal was cleaned right down to the drum. He could not see that it was possible to do such thorough cleaning with forceps and there was a likelihood of pushing debris farther down and impacting it. He thought that tycin was a useful addition to the range of preparations for the ear. Its anaesthetic action was valuable and persisted for three to four hours. It could be used for those early, acute cases where the ear was too inflamed to clean at the first examination. Three or four days' treatment with tycin at home usually sufficed to allow the ear to be washed out on the next occasion.

In regard to papillomata, and even larger sarcoids in the external ear or ear flap, he used the application of podophyllin (25 per cent.) in liquid paraffin once daily for a few days, and these growths usually withered up and disappeared.

At the annual meeting of the Irish Large White Pig Breeders' Association, now known as the Irish Pig Breeders' Association, with a membership of over 120, it was decided that progeny testing was a prime necessity and to press for its official adoption.

GONADOTROPHIN-INDUCED OVULATIONS IN THE BUFFALO

BY

E. S. E. HAFEZ, B.Sc. (Agric.), Ph.D. (Cantab.),
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In many respects the reproductive pattern in the buffalo resembles that of the cow, published work in this field being reviewed and augmented by Hafez (1953a). The time of ovulation in relation to oestrus, also the endocrine system of the buffalo, are still obscure. Conception can occur throughout the year (Badreldin, 1952) and the number of matings required for conception is 1·67 (Hafez, 1953b). A heavy annual loss amongst buffaloes due to physiological sterility or low reproductive potentiality, occurs in many countries.

Gonadotrophic hormones are now prepared in commercial or purified forms from different natural sources such as pituitary glands (fresh or dried), urine of pregnant women (P.U.) and serum of pregnant mares (P.M.S.). Since the F.S.H. and L.H. content of the anterior pituitary vary considerably with the species (Hammond, 1950) and the breed (Warwick, 1949), the different hormone preparations vary in their potency and their stimulating effect in different classes of animals. The raw serum of pregnant mares if stored at 10° C. has a gonad-stimulating effect as demonstrated on cattle (Dowling, 1949) and sheep (Robinson, 1950).

In cattle, gonadotrophic hormones are used extensively either alone or with sex hormones to treat different cases of physiological sterility (reviewed by Asdell, 1949, and Wilson, 1949). Super-foetation has been very successful in cattle (Hammond, Jun., 1950), sheep and goats (Phillips *et al.*, 1945). The primary step in applying the ova transplantation technique is superovulation ; this has been adopted in cattle (Casida *et al.*, 1943 ; Rowson, 1950), sheep (Umbach, 1951) and rabbits (Venge, 1951) by gonadotrophic treatment. The present investigation was an attempt to induce ovulation in anoestrous buffaloes. It was also hoped to induce multiple ovulation in sexually active animals by using low dosage gonadotrophin injections.

Two groups of experimental animals and four sexually active buffalo-bulls were available. The first group consisted of nine anoestrous buffaloes aged from four to six years ; they had not shown oestrous activity for some six months, had anoestrous ovaries (as revealed by rectal palpation) and had calved at least once. They were injected with 1,200, 1,800 or 2,400 I.U. of P.M.S., the dose being divided into three equal portions given on three consecutive days. The second group consisted of 10 buffaloes aged from three to six years. They had calved (calving season from October to January) and had shown two *post-partum* oestrous cycles before hormone treatment. Oestrus was accompanied with ovulations as revealed by rectal palpation. They were injected with 1,200, 1,800 or 2,400 I.U. of P.M.S., the dose being divided into two equal portions given on two consecutive days, the first portion being injected five days before the expected oestrus. A commercial gonadotrophic product, "Gestyl," was used ; injections were all given subcutaneously in the neck region. Oestrous observations were carried out twice daily, the experimental buffaloes being joined with a buffalo-bull in a paddock. The buffaloes were hand served when they came on heat and were allowed to go to term and to be tested again for oestrus. All animals were fed *ad. libitum* with concentrates and green fodder (green clover or maize). This experiment was carried out from August, 1951, to January, 1953, on animals derived from

two herds, one kept at the Animal Research Farm, Faculty of Agriculture, Cairo, and another herd on a dairy farm.

All anoestrous buffaloes manifested normal oestrus from four to six days after injection of the third portion. When mated they required but one service for conception, the pregnancy period and birth weights being normal. The sexually active buffaloes, when injected some days before their expected oestrus, experienced their oestrus either on the expected day (21 days after the last oestrus) or one to two days later. When mated they required 1·1 service per conception and all calved singles. *Post-partum* oestrus was manifested in all experimental animals and they were mated again after 60 days service period.

Since the P.M.S. contains small quantities of L.H., it seems that the anoestrous buffaloes are more prone to deficiency in F.S.H. It was impossible to induce multiple pregnancies by applying the three doses of P.M.S. It is possible that superovulation took place, but fertilisation did not occur. It is also probable that more than one ovum was fertilised and implanted but that embryonic mortality followed, with a subsequent single birth.

It is concluded that subcutaneous injection of P.M.S. was effective in inducing ovulation in anoestrous buffaloes but not in inducing multiple pregnancies in sexually active animals. Work is still in progress using other sources of gonadotrophins and applying different doses and different intervals of injection. Thanks are due to Professor A. L. Badreldin and to Mr. M. Alaam (buffalo breeder) for providing facilities.

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RABIES IN ALBERTA

The Canadian Department of Agriculture has warned holiday makers planning to camp in national parks in Alberta this summer that "extreme danger" will arise from sleeping in the open or in tents in any part of the province where rabies has occurred, says the Calgary Correspondent of *The Times*. Rabies has been present in the animal life of Alberta since about a year ago.

"Tourists have been told not to befriend any wild animals in the parks (in which all forms of wild life are protected). Officials point out that although rabies is most common among canine species, it has also been detected in lynx, bears, moose, cats, cows, pigs and caribou. Campers are warned to avoid the natural habitats of gophers, musk-rats, badgers and mink, although no cases have been discovered so far among these species.

"It was reported recently that a rabid jack rabbit (similar to an English hare) attacked a three-ton truck and jumped through a window into the cab before the driver could destroy it. Travellers accompanied by dogs must have the animals inoculated against rabies before they will be permitted to enter the national parks in Alberta. Americans must have their dogs inoculated before entering Canada."

ANIMALS I HAVE MET

THE WOMBAT

BY

D. D. OGILVIE

Picture, if you can, a wombat. Four feet of fur and fancy which likes best the darkest nights and the time just after closing when men move warily on the homeward trail. A sort of super-rat, under a tropic sky, which has lost its tail and which you do not believe really exists anyway. But the wombat does exist. Very much so. Indeed, when you really get to know him it seems incredible that on the night you first saw him you should have written him off as nothing more than an alcoholic mirage. Perhaps it was because you had always imagined a wombat to be something which, like the multiple stores manager, flitted from branch to branch. Perhaps you thought it unlikely that after sampling Australian rum an 80 lb. tailless rat would cross your path and grunt politely and move on as two ships move on that pass in the night.

But now in broad daylight there is no doubt that he is real although perhaps less like a giant rat and more like a small bear or even a rather hirsute brown pig, or possibly a badger. In fact just like a wombat!

Now, apart from all this, what is there to a wombat? Well, he has one great distinction amongst animals—he is no doubt the champion digger. He would as soon dig as you or I would sit in a chair and watch him. He would certainly prefer to dig through a hill than walk over it. For him none of the lofty views, the wide panoramas of the hilltop. He would be nose down drilling his way through, hell-for-leather, and why? Merely to get to the other side, because although digging is his life it is also his hobby and he must burrow or bust.

Some of his digging has a purpose to it but most of it seems to be just to pass the time away. He will start on the side of a hill and drive straight in for 20 or 30 yards, then come out, spit a couple of times or so, and proceed to drive in an oblique direction. Then he will make it a triangle and he will fiddle about pulling a wall down here and filling one up there until he is satisfied. Then he will abandon the lot and start elsewhere. A straight burrow a few feet deep would be just as safe for him and much less draughty but he does not seem to see it that way.

He has the excavating business well taped. Although he obviously enjoys his work he does not like to make it a hardship. When he is digging he lies snugly on his side tearing out the subsoil with his long powerful foreclaws and handing it back on the conveyer belt principle with his hind feet. He likes to deal with roots. The small ones he just eats, the bigger chaps he saws through. In fact he can cope with most eventualities. About the only thing which can put a kink in a wombat's tunnel is a well-anchored and sizeable rock.

Just in case you think from all this that the wombat's father was a rat I think you should know that this is not so. In fact the wombat is a marsupial and a sort of first cousin to the koala bear. The only thing he really has in common with the rat are his teeth which, unlike those of any other marsupial, keep on growing all his life. No doubt his ancestors wore out so many sets of dentures chiselling at tree roots and moving mountains that they decided that improvements were essential, so they armed him with the real tools for the job.

What do wombats eat? You would think perhaps that living like earthworms they would feed on a similar diet. But no they do not. For breakfast, which, coming from Australia where everything is topsyturvy, they have just after dusk, they like some succulent grass. For lunch, which comes around midnight, they have more grass, and for bed-time supper at dawn, just for a change, they have a little more grass! As an appetiser wombats are passionately fond of puff-ball fungi just as some people fall in a big way for truffles. And then, of course, when they are battling their way along to blaze a trail a yard or so beneath a forest they have an awful lot of roots to digest if they do not want to zig-zag all over the place.

Unfortunately the wombat has a very low grade botanical knowledge. This often makes life difficult for him. Anything within reason which shoots up out of the ground as a monocotyledon he regards as grass, and the bigger and juicier the better. He just loves young wheat, for example, which, differently from the farmer, he judges no more than ordinary pasture. He objects only slightly to the wire netting with which the farmer inconsiderately surrounds his fields. With a nonchalant air he is always ready to demonstrate to his animal associates just how to punch a hole in it. Grunting methodically as he bends back the edges to make everything neat and shipshape, he is the first to stand aside to let his family and their relations shamble in, to say nothing of the odd rabbit, kangaroo rat, pademelon and what have you. A good party can eat off half an acre of wheat in a night which, strangely enough, is not always appreciated by the farmer as the feat of degustation which it really is.

But the wombat means no harm. By nature he is a very lovable chap. Young wombats make excellent pets. They like children and play happily with them, rolling over and over on the floor but lying quite still to be stroked. After a really vigorous romp he will go outside into the garden and slack off by adding a yard or two to whatever tunnel is his current fancy. Then he will come indoors again for some food, grunting and grumbling methodically until he gets it.

One word of warning if you are thinking of having a wombat for a pet. Do not leave him in the drawing room when you go to bed at night. He is not very happy there on his own and it is most disconcerting in the morning to meet him at the back door which he has reached via the foundations of the house and a quick dash through the damp-proof course.

HIGHER EDUCATION IN CENTRAL AFRICA

The immediate foundation of a University College as a first step towards a full university in Central Africa is recommended in the *Report of the Commission on Higher Education for Africans in Central Africa*, published on May 21st by the Central African Council at Salisbury, Southern Rhodesia. The report was prepared by a commission set up by the Central African Council. The report recommends that the University College should be created by Royal Charter and that in preparing its constitution the constitutions of the new universities in Britain should be followed. Application should be made by the College to be received into "special relations" with the University of London. The Commission points out that it is contrary to university tradition to have regard to race, religion or class when selecting candidates for admission. The Commission prefers Salisbury, Southern Rhodesia, as the site of the College, if the present plans for a Rhodesia University can be suitably modified. Otherwise, Lusaka, Northern Rhodesia, is suggested as an alternative.

CLINICAL COMMUNICATION

HAEMATIDROSIS IN A HORSE

HOLMAN E. WILLIAMS, D.V.M. (TORONTO), M.SC. (WISCONSIN),

DEPARTMENT OF AGRICULTURE, TRINIDAD AND TOBAGO, BRITISH WEST INDIES

On May 21st, 1952, the author was called to a Thoroughbred mare in Tobago, imported from the United Kingdom, and stated by the owner to be sweating blood.

The animal was found to be in poor condition although described by the attendant as being a good eater. A large number of nodular swellings were present on the forequarters, neck, face, sides, flanks and hindquarters. Bleeding had occurred on several occasions on the front aspect of the off hock and from the inner surface of the left ear. There was no evidence of any other disease. Several other horses on the same property showed identical nodular lesions but these animals were in good condition of health and they never bled.

Examination of the nodules revealed scabby heads. There were many reddish areas of skin free of hair. Areas actually bleeding were raw as if bruised. Immature ticks were present on the animal.

Smears made of serum squeezed from some nodules contained microfilariae, which were also present in blood from the jugular vein. They were unsheathed and three of them measured as follows :—

1st	Length in microns,	189·3 ;	width in microns,	4·8
2nd	" "	172·8 ;	" "	4·8
3rd	" "	179·8 ;	" "	4·8
Average	" "	180·4 ;	" "	4·8

A nodule on the mare was cut into and examined carefully, but it was found free of any filariid parasite. Examination of a similar nodule on another mare on the same estate was also negative.

By the 17th of the following month the condition of the mare had improved and there was a marked decrease in the number of nodules. In December, 1952, she was again in poor condition and bleeding.

Unfortunately, due to circumstances beyond control, it was not possible to determine if similar microfilariae were present in or absent from the bloods of the other horses showing subcutaneous nodules. It was concluded, nevertheless, that the condition was a true dermatorrhagia parasitica caused by a filariid parasite other than *Onchocerca reticulata* or of the genus *Setaria* which has sheathed microfilariae. No treatment was found in the literature. Spontaneous permanent recovery has been reported.

[The condition described is *Parafilaria multipapillosa* infestation or "summer bleeding." Udall mentions it. Mönnig gives a brief account, stating that it occurs in Eastern countries and that the adults live in the subcutaneous and intermuscular connective tissue, producing skin nodules in summer. Neveu-Lemaire (1936), "Traité d'Helminthologie Médicale et Vétérinaire," Paris : Vigot Freres, gives the geographical distribution as Europe ; Africa (Algeria and Morocco); Asia (India); and South America. He states that the intermediate host is unknown.

Fiebiger (1947), "Tierische Parasiten," Urban and Schwarzenberg, Vienna, suggests that the parasite is carried by flies which feed on the sores (without saying what flies). He states that the larvae, and occasionally the eggs, occur in the blood.

"Summer bleeding" is a well-established condition in horses in some parts of the world.—*Editor.*]

ABSTRACTS

Dilution of Bull Semen with Frozen Egg Yolk-Sodium Citrate*

The writer has realised that the time absorbing procedure of making egg yolk buffers in a big centre can be most expensive, and has been prompted to try bulk preparation and long-term storage at −15° F. Buffer was made up in 500 c.c. lots, and stored in sterilised tins, being used at a 1 : 60 dilution on a routine A.I. stud.

Using the split sample technique four diluters were used: (*a*) Freshly prepared control dilution ; (*b*) fresh diluter with penicillin and streptomycin added ; (*c*) diluter prepared and frozen for one month before use ; (*d*) as for (*c*) but with antibiotics added prior to freezing. Based on a non-return percentage at the end of 60 to 90 days there was no significant difference between any of the dilutions when 1,558 first services were bred.

G. F. S.

* **Dilution of Bull Semen with Frozen Egg Yolk-Sodium Citrate.** Hurst, V. (1953). *J. Dairy Sci.* **36**. No. 2.

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Epididymitis of Rams*

In their introduction the authors draw attention to previous work on epididymitis in rams, and state that Gunn reported on a 5·3 per cent. incidence when 6,420 rams were examined.

A series of natural and experimentally acquired cases are illustrated and reviewed, and the authors conclude that a " Brucella-like " organism was responsible for the enlargement of the epididymis and subsequent changes. An examination of slaughterhouse material showed that the suggested causal organism was present in 50 per cent. of 20 abnormal cases seen, and three of 40 normal epididymes.

When serum cultures of the organism were injected into the testicle a lesion was set up ; it was found impossible, however, to infect rams by the subcutaneous or intravenous routes and when serum was injected into the testicle as a control no untoward sequel ensued.

Ovine epididymitis is known to lead to culling within the flock and until more is learnt of the " Brucella-like " organism the mode of transmission is in doubt.

G. F. S.

* **Epididymitis of Rams : Preliminary Studies on the Occurrence and Pathogenicity of a Brucella-like Organism.** Simmons, G. C., & Hall W. T. K. (1953). *Aust. Vet. J.* **29**. No. 2.

REVIEW

[**Black's Veterinary Dictionary.** Third edition: W. C. Miller, M.R.C.V.S., F.R.S.E., & Geoffrey West, M.R.C.V.S. (1953). Pp. 1120 ; 326 diagrams and 68 photographs. A. & C. Black, Ltd., 4, 5 and 6, Soho Square, London, W.1. Price 50s. net.]

" Black's Veterinary Dictionary " has already established itself as an essential part of the library of the general reader, and the new edition will be most welcome to those who wish to keep up to date in veterinary matters. We wonder, however, whether it is wholly tradition which has persuaded the authors to retain the well-known title. A glance at the contents of this book makes it very clear that we are dealing not with a dictionary but with an encyclopaedia, and in this sense there is just the possibility of this publication getting out of hand.

The book is extremely well produced with excellent photographic reproductions and in a fine clear print which, despite its smallness, is very readable. The material is of such a nature that it would provide informative reading not only to the layman but to members of the veterinary profession including both the specialist and the general practitioner ; for in a general sense it has much to offer to both of these. It provides a ready source of reference for anyone interested in veterinary or, one should perhaps say, any matters relating to animal management and disease, while as a means of filling in those magnified gaps in their knowledge as examinations loom up, students could not find a better or handier fount of information anywhere. The authors are to be congratulated on the concise way in which they have covered such a vast field of expanding knowledge.

NOTES AND NEWS

Diary of Events

June 17th.—Meeting of the Scottish Metropolitan Division, B.V.A., at Stirling (Golden Lion Hotel), 2.30 p.m.

June 18th.—Meeting of the Herts & Beds Division, B.V.A., at 70, Holywell Hill, St. Albans, 7.30 p.m.

June 18th.—Summer Meeting of the Section of Comparative Medicine, Royal Society of Medicine, at the Wellcome Research Laboratories, Langley Court, Beckenham, Kent, 2 p.m.

June 19th.—Annual General Meeting of the Association of Veterinary Teachers and Research Workers (Scottish Regional Group) in the University of Glasgow Veterinary School, 2 p.m.

June 20th.—Meeting of the Biochemical Society in the Department of Biochemistry, University of Oxford, South Parks Road, Oxford, 11 a.m.

B.V.A. Technical Development Committee Two-day Meeting

Wednesday, June 24th
2.30 p.m., Technical Development Committee at 36, Gordon Square, London, W.C.1.

Thursday, June 25th
10.30 a.m., Technical Development Committee at 36, Gordon Square, London, W.C.1.

June 24th.—Meeting of the Supplementary Veterinary Register Division, B.V.A., at the Connaught Rooms, Great Queen St., Kingsway, W.C.2.

June 25th.—Annual General Meeting of the North of Scotland Division, B.V.A., at Aberdeen (Northern Hotel), 2.30 p.m.

June 25th.—Meeting of the Western Counties Division, B.V.A., at the University of Bristol Veterinary School, Langford, 2 p.m.

July 23rd.—Meeting of the Midland Counties Division, B.V.A., at Nuneaton (The Newdigate Arms).

July Meetings of B.V.A. Council and Committees
At 36, Gordon Square, London, W.C.1

Wednesday, July 29th, 1953.
11 a.m., Organising Committee.
2.15 p.m., Home Appointments Committee.
4 p.m., Parliamentary and Public Relations Committee.

Thursday, July 30th, 1953.
10 a.m., Veterinary State Medicine Committee.
12.30 p.m., Finance Sub-committee.
2 p.m., General Purposes and Finance Committee.

At the Connaught Rooms, Great Queen Street, W.C.2

Friday, July 31st, 1953.
11 a.m., Council meeting.

Aug. 9th—15th.—XVth International Veterinary Congress, Stockholm, Sweden.

Sept. 6th—12th.—Seventy-first Annual General Meeting and Congress of the British Veterinary Association, at Aberdeen.

R.C.V.S. Examinations

Thursday, June 25th.—M.R.C.V.S. Written Examinations.
Friday, June 26th.—Ditto.

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Hotel Accommodation in Aberdeen

We are advised that single bedrooms are still available for the period of the Congress, at all hotels in Aberdeen except the Caledonian, the Northern and the Gloucester. This announcement cancels the somewhat misleading intimation to the contrary, made in our issue of May 9th, which was based on a misapprehension.

* * * * *

R.C.V.S. Council: Cambridge Vice-Chancellor Appointed a Member

Members of the profession will be gratified to learn that, as is announced in the March 27th issue of the *Cambridge University Reporter*, Professor Sir Lionel Whitby, M.D., Master of Downing College and Vice-Chancellor of the University, has been appointed a member of the Council of the Royal College of Veterinary Surgeons, for four years.

Receipt of the above information has been followed by the announcement that Mr. H. U. Willink, Q.C., Master of Magdalene College, has been elected to the office of Vice-Chancellor of Cambridge University for the ensuing academic year in succession to Sir Lionel Whitby.

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Veterinary Council of Ireland.—Dr. J. A. Nicholson, Professor of Physiology in the Veterinary College of Ireland, has been elected a member of the Veterinary Council of Ireland.

* * * * *

PERSONAL

Honorary Fellowship R.C.V.S. for Professor W. M. Mitchell

At the meetings of Council R.C.V.S. recently held in Edinburgh, Professor W. M. Mitchell, Principal of the Royal (Dick) School of Veterinary Studies, was presented with the diploma of Honorary Fellowship of the Royal College of Veterinary Surgeons.

The presentation was made by the newly elected President of the Royal College, Professor R. E. Glover, Liverpool.

He said that in the succession of principals and teachers in the Royal (Dick) School no one had contributed more to the advancement of their profession, to the prestige of his school, and to maintaining the dignity of that profession than had Professor Mitchell.

Professor Glover congratulated Dr. Mitchell, and said he received the diploma as a mark of the esteem in which he was held and for the contribution which he had made to veterinary science.

. . . . .

Forthcoming Marriage.—Andrew—Bateman.—The engagement is announced between Angus Sinclair, M.R.C.V.S., son of the late Mr. T. Andrew and Mrs. Andrew, of Kenilworth Crescent, Belshill, Lanarkshire, and Sheila Frances, second daughter of Mr. J. K. Bateman, B.Sc., M.R.C.V.S., and Mrs. Bateman, The Hook, Northaw, Potters Bar.

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Births.—Barnett.—On May 14th, 1953, to Joyce (*née* Minson) and David Barnett, M.S.R.C.V.S., a daughter—Gabrielle Margaret.

Barnsley.—On June 7th, 1953, to Molly, wife of Derek Barnsley, Holly Cottage, New Street, Wells, Somerset, a son—Timothy.

Hirst.—On May 29th, 1953, to Audrey, wife of Basil Hirst, M.R.C.V.S., 8, Connaught Place, Weston-Super-Mare, a daughter, sister for Martin.

Kennea.—On Coronation Day, at Weston-Super-Mare, to Joan, wife of T. L. Kennea, M.R.C.V.S., a son, Hugh Allen.

R.C.V.S. OBITUARY

Veitch, Alexander, Garnock, Locking Road, Weston-Super-Mare, Somerset. Graduated Glasgow, May 27th, 1890. Died June 1st, 1953; aged 86 years.

Mr. Alexander Veitch, M.R.C.V.S.

Mr. Alexander Veitch, M.R.C.V.S., whose death we record above with much regret, had practised as a veterinary surgeon in the town and district of Weston-Super-Mare for a period of 54 years—from 1893 until his retirement in 1947.

He was representative of the Board of Agriculture, and afterwards the Ministry of Agriculture and Fisheries, for a wide area—including Avonmouth Docks—and, in appreciation of his long services his appointment was extended for two or three years after the normal retiring age.

Mr. Veitch, who was unmarried, gave invaluable service to local agricultural shows.

. . . . .

The Late Colonel C. H. S. Townsend, C.B.E., O.B.E., T.D., M.C., F.R.C.V.S.

A Further Appreciation

(*Contributed by an Intimate Friend*)

By the sudden death of Colonel C. H. S. Townsend, C.B.E., O.B.E., T.D., M.C., F.R.C.V.S., the veterinary profession has lost one it could ill afford to lose, and this for many reasons; not only was he outstanding for his surgical and other work, in connection with his profession, but his loss to the sporting world is calamitous. His quiet, gentlemanly, unassuming manner was an example to everyone. In his War work he came in contact with so many in different spheres of life and it was always his ambition to do a good turn whenever he could; any recommendation from him always carried weight and many a man has found a good position solely because of his help: I know of many he helped in this way.

He loved his work and only those who had the pleasure of seeing him operate can ever appreciate to the full the wonderful but quiet way in which he did so—at the same time always finding time to explain any of the details of the operation. Although he was skilful at most operations on horses, his name will always be best remembered for the way he has carried on the Hobday operation for roaring. In this he was truly marvellous; he used only a local anaesthetic (unlike Hobday) and to complete this operation from the time of opening the larynx was only a matter of a few minutes. His results were outstanding: during the last few years he used to do this operation all over the country and frequently in Ireland, and only last year he travelled to America solely to operate on two horses for defective wind. I know that one day he had hoped to publish a list and number of the horses he operated upon for this complaint, together with results.

Although he had insufficient time to take any active part in veterinary politics, he liked nothing better than entertaining and giving surgical demonstrations whenever asked to do so. Those members of the Midland Counties Veterinary Medical Association present will always remember the wonderful show he gave them at Weedon many years ago, when he was Veterinary Remount Officer there; not only did he give surgical demonstrations, but he showed the Army team of show jumpers and also the raw unbroken remounts as they arrived from Ireland. He himself purchased hundreds of remounts in Ireland for the Army and on this occasion he showed how a raw remount could be made into a perfect charger in six months, while to finish up this demonstration a dozen of these remounts after jumping the very difficult Weedon course, all jumped over the fixed iron rail fencing into his hospital yard.

When he was stationed at Aldershot he demonstrated and performed the (Fossetti) Swiss operation for crib-biting and wind sucking, also several other operations, before a large joint meeting of the Aldershot and Central Veterinary Medical Associations. Many years ago he gave a wonderful day to a big attendance of the members of the Lincolnshire Veterinary Medical Association, when he was Veterinary Officer at Melton Mowbray, doing much the same work here as he did at Weedon. He was, I believe, one of the few that performed the roaring operation in the standing position, and this he did at the above-mentioned Melton Mowbray meeting.

Whatever he undertook, his one object was to do it well and thoroughly, and no one who has seen the various veterinary

hospitals of which he had charge could fail to notice the essence of neatness, tidiness and cleanliness everywhere.

He took part and went through both World Wars and was in the retreat from Mons, where he was attached to the Cavalry Division, and for this he was awarded the Military Cross. At the outbreak of the last War he was at camp with the Leicestershire Yeomanry and was soon sent to the Middle East, but not before he had raised and fully equipped a veterinary hospital, complete with horses and personnel. During this War he did much good work and was A.D.V. & R.S. Palestine and later D.D.V. & R.S. of C.M.F. For these services he was awarded the C.B.E.

Colonel Townsend was fond of all sport, but his favourite was hunting. He had been Master of the Lahore and Quetta Hunts, hunting them himself, whilst serving in India, and before leaving India had a presentation of a very beautiful solid silver tray, with the names of the members of the Hunt engraved on it. The hounds were taken to Quetta Station when he left and by special permission were filmed walking up and down the platform. He was also Master of the Badworth Fox Hounds for one season after the War, when his veterinary hospital was stationed at Doncaster, and hunted hounds himself. Previous to the War he was Joint Master of the South Atherstone Fox Hounds for two seasons with Colonel Shaw also hunting hounds himself. Since leaving the Army he was made Joint Master of the V.W.H. (Cricklade) Hunt with Lady Apsley, sometimes hunting hounds himself. Unfortunately, owing to excessive work, he reluctantly gave this up after two seasons. Whilst at Aldershot he was Master of the Aldershot Drag for two seasons, and it was then that the present Duke of Windsor (the Prince of Wales as he was then) hunted occasionally with this pack.

He was just as popular a Master of Hounds in the hunting field as he was in other things he undertook. In hunting hounds he seldom got excited or became ruffled. Since his death several people in Gloucestershire have told the writer that this last season's hunting he has never gone so well, jumping the biggest, stiffist stone walls he could find.

He was considered one of the best judges of hunters and breeding stock in the country and had acted as such at all the leading horse shows in England, Scotland and Wales. Twice since the War he had judged hunters at Royal Agricultural Society of England Shows, also twice at the Royal Dublin Show—a very great honour for any veterinary surgeon. He had been selected as one of the judges in this year's "Horse of the Year Show" at Harringay in September next: another honour for our profession.

He had served for several years, and at the time of his death was still serving, on the Council of the Hunters Improvement and National Light Horse Breeding Society, and the writer knows of what great value his services were to this Society, and how much they were appreciated.

When he was stationed at Aldershot, Colonel Townsend twice won the King's Cup at the Aldershot Horse Show with his wonderful horse "Foxy Lad"; this horse was a great prize winner in the show ring and also won point-to-point races with him riding. In his younger days and at the R.A.V.C. point-to-point in Hampshire he won the R.A.V.C. Challenge Cup on his brother's, Major Townsend's, horse, "Travel On," at which meeting the late Director-General R.A.V.C. (Major-General Anthony) judged the race; the following year he was second on the same horse.

Before he retired from the Army, he acted as Assistant Director-General R.A.V.C. at the War Office.

Colonel Townsend loved the country. He was born in the village of Long Stanton, Cambs, where his father and grandfather were both veterinary surgeons and where his brother, Major C. W. Townsend, is still in practice. Just before the War he bought a farm in Gloucestershire, where he lived at the time of his death and where he bred hunters, kept his show horses, and had a T.T. herd of cattle. He liked nothing better—when he found time, which was seldom—than to walk round his beautiful farm in the summer evening and show friends his cattle and horses. At this farm he ran a small veterinary hospital: here his stables, yard, harness room and surgery were all a model for anyone to see. He had built up an extensive practice as a consultant.

A wonderful shot, he loved the sport and always spent a short holiday in Scotland grouse shooting.

One must say a few words about the wife he has left behind him, known to everyone as "Poppy," who is known throughout the whole country as being one of the best, bravest and most fearless horse women. She schools and rides all her young horses for hunting and is one of the few lady riders to have ridden and won the Horse and Hound Challenge Cup for jumping at the White City Show. Her two young children rode in the children's jumping at the White City last year, both being accomplished riders.

Colonel Townsend was indeed loved and respected by everyone with whom he came in contact, and will be greatly missed, but his memory will live for a long time. We, as a profession, have every right to be proud of him and although his end was sudden and tragic, I feel sure he died as he would have wished, taking part in one of the many sports he loved. There is no doubt that his unremitting, tremendous amount of work and sport all taxed his constitution and he confided to only two people I know, that his heart was not all that it should be. Yet we may truly say of him, his was an example of a life well run and well done.

He was buried near the sweet tiny church at the small village of Eastleach on the top of a hill in the Cotswolds: he seldom missed going there on Sunday mornings, when he was at home. The funeral service was private and was attended only by his relatives and a few intimate friends, including Captain F. G. Lawfield, M.R.C.V.S., Major Townsend's partner. The floral tributes were very beautiful and must have numbered at least 200; they included several from different Hunts and Agricultural Show Societies, including the Royal Dublin Show.

A memorial service was held at Fairford Church on the afternoon of Friday, June 5th, when Colonel Clabby and Brigadier Heveningham attended to represent the Colonel Commandant and all ranks of the Royal Army Veterinary Corps.

. . . . .

Colonel Townsend in the Middle East

W.P.M. writes:—

Palestine and Syria seem a far cry from the hunting field in England, where Colonel Townsend made a name for himself that will be long remembered. But these Middle East countries, which held so many Army folk away from their homes and people for so long, are singularly devoid of amenities for troops. It is those serving there with him who will remember with warm regard the name of "Mouse" Townsend, who was chiefly instrumental in arranging the many very pleasant and varied sporting meetings which were held in the vicinity of the veterinary hospital at Ramle, and later at the Beirut Veterinary Hospital.

Reading from a card of the "Gymkhana Horse Races on Sunday(!), March 9th, 1941, at Ramle Aerodrome, by kind permission of the Officer Commanding the R.A.F., Ramle," it will be seen the judges were General Clark, M.C., and Colonel Peatt, O.B.E. The Secretary was Major C. H. S. Townsend, C.B.E., O.B.E., M.C. Amongst the varied events on that day, catering for most were the troopers' jump race, de girls' stampede (for Arab horses of the Palestine Police), the Mubtedie stakes (for Arab horses of the inhabitants of Palestine and Transjordan), and—an event of considerable historical interest—the Royal Scots Greys Regimental farewell grey horse race in which 27 officers of the regiment rode just prior to its mechanisation.

He formed the veterinary hospital by transforming part of the Arab town of Ramle for the purpose, and making the most ingenious use of local resources it became a very efficient hospital and horse depot. Starting with a modest donkey race or two, more ambitious horse meetings followed, and later a scratch pack of hounds (mostly Syrian pointers) were made into the old Ramle Vale fox hounds.

By his gay humour and the great energy which he put into everything to which he turned his hand, the hospital became the "Mecca" for all ranks, and people usually contrived to spend some of their leave near Ramle. As a result a very great deal of interest was created outside the ranks of the R.A.V.C. in the efficient work which was being carried on in the hospital and remount depot.

Later I went with him to take over some captured horses that had been more or less abandoned without attendants or forage: also mules that had been tied in lines and had not been watered or fed for a considerable time. Mouse, who did not usually show his feelings, I noticed was visibly affected by the plight of these war-tired animals. I do not know of anyone who could have got things moving more quickly, for he had the sort of presence that filled strangers with a sense of confidence and he soon had things running in first-class style.

So long as there are people who remember their M.E. experiences there will be those who gratefully remember also the tall figure of Mouse Townsend and the good lessons they learnt from him of life, men and horses.

Need for Veterinary Supervision of Meat Inspection

DR. WOOLDRIDGE'S PLEA AT INSTITUTE OF MEAT DINNER

Proposing the toast of "The Guests" at the annual dinner of the Council of the Institute of Meat, Dr. W. R. WOOLDRIDGE (reports the *Meat Trades Journal* in its issue of June 4th) said there were two factors in which both the Institute and the meat trade were concerned; the first being the improvement of the status of those individuals concerned in the trade, and the second function was to improve the appreciation of the public of the quality of meat and the assurance the trade could give to the public that meat was of a high quality. It was in this latter respect that Dr. Wooldridge made an earnest plea for meat inspection to be carried out under veterinary supervision. It was because of our present meat inspection services that this country was not in a position to export meat to other countries except in those instances where it had been properly inspected by a veterinary officer.

Earlier in his speech Dr. Wooldridge said that prominent representatives of the Civil Service were always present on those occasions and that evening they also had the Parliamentary Secretary of the Ministry of Food. Dr. Hill might think that he would only be there as long as he held office; the Institute, however, did not approach things quite from that angle and he would always be a welcome guest whether in office or not. The Institute was an educational body, but it did approach its problems from a practical point of view; they preferred the personal touch so far as their guests were concerned. They were striving to make headway in an educational field and there were many difficulties to overcome. Fortunately there were many people within the scope of the meat trade determined to work together to fulfil and maintain an educational level. He then proceeded to mention those present who were prominent in the educational world and went on to express appreciation of the great help the Institute had received through the efforts of lecturers who had given of their time to speak on a variety of subjects. The Institute's thanks were also due for the co-operation extended by the various branches of the meat industry, and Dr. Wooldridge said it was a particular pleasure to the Institute to know they had in their company that evening the Presidents, etc., of a number of meat trade organisations. They were particularly pleased to welcome Mr. J. R. McNab, President of the Scottish Meat Traders' Federation. In addition to the gentlemen he had mentioned, they had, of course, a representative of Her Majesty's Government, and although on one or two previous occasions they had been priviledged to have a Minister of Food, Dr. Wooldridge thought they would all agree none had been more welcome than Dr. Charles Hill had been that evening.

In his response, Dr. Hill, in the serious side of a witty speech, without disclosing any new information on the question of decontrol of meat, gave a clear picture of the real problem facing the Food Ministry on this point. He had "no pontifical announcement to make" on what might happen in the future—"unlike some people in the trade who, with an air of informed wisdom, announce their theories from time to time in the national Press." The Government must be given credit for aiming at the same objective as the trade—bringing the present system of control to an end.

In his acknowledgment of the toast of "Past-President," Mr. James Brewster took the opportunity to support the plea of Dr. Wooldridge for better inspection of meat. He felt the Institute could provide the right background for filling the gap in their present meat inspection system.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

ANTHRAX:

Ches.—Street Farm, Tarvin, Kelsall, Chester (June 1st); Bickley Hall Farm, Bickley, Malpas (June 4th).

Kent.—Chapel Farm, Lenham, Ashford (June 1st).

Yorks.—Scott Laithe Farm, Bolton-by-Bowland, Clitheroe (June 1st); University of Leeds Experimental Farm, Headley Hall, Bramham, Nr. Tadcaster (June 6th).

FOWL PEST:

Cornwall.—Clijah Farm, Redruth (June 4th).

Leics.—Cork Hall Farm, Newtown, Linford (June 4th).

Middx.—Harrow Farm, Charlton (June 4th).

Surrey.—30, Heathervale Road, New Haw, Weybridge; Coombe Lees, Marsh Lane, New Malden (June 3rd).

Yorks.—Dalton, Thirsk; 32, Elm Avenue, Goole (June 4th).

SWINE FEVER:

Beds.—Howbury Hall Farm (June 3rd); Churchill Farm and the Post Office, High Street, Meppershall, Shefford (June 4th); Springfield Farm, Spring Road, Kempston (June 5th).

Cornwall.—Viewlands, Tavistock Road, Launceston (June 5th).

Essex.—Floradean, Lodge Lane, Collier Row, Romford; Middlesex Hospital Convalescent Home Pig Club, Clacton-on-Sea (June 3rd); Home Farm, Greenstead, Colchester; Cobbs Fenn, Sible Hedingham; Convent Hill Piggery, Bocking (June 4th); Gladwyns Farm, Hatfield Heath (June 5th).

Gloucs.—1, Bride Cottage, Littleton-on-Severn, Thornbury (June 4th).

Isle of Ely.—34, Ramsey Road, Benwick, March (June 4th).

Kent.—Thames View, Church Road, Hartley, Nr. Dartford (June 4th).

Lancs.—Fennyfield House, Chadderton (June 4th); 16, Heapey Road and Piggeries off Bagganley Lane, Chorley; Green Rake Farm, Birtle, Heywood (June 5th).

Lincs.—Church Farm, Sansthorpe, Spilsby (June 3rd); Station Farm, Sibsey, Nr. Boston (June 4th); Side of Slates Road, Wrangle, Boston; Brooklyn House, Ludford, Lincoln; Manton Cottage, Bridge Street, and Orchard Buildings, Frognal, Deeping St. James (June 5th).

Middx.—Stanwell Farm, Bedfont Farm, Stanwell (June 5th).

Monmouth.—Sheds at Hazeldene, Lower Pontnewydd (June 4th); Church Farm, Llanfrechfa Lower, Croesyceiliog (June 5th).

Norfolk.—Mill Farm, East Wretham, Thetford (June 3rd); High Common Farm, Wymondham (June 4th); Docking House, Leys Lane, Attleborough (June 5th).

Northants.—Messuage Farm, Lower Benefield, Peterborough; Glassthorpe Hills Farm and New Piggery, Harpole (June 3rd); High Street, Collingtree (June 4th).

Notts.—12, Cliff Drive, Radcliffe-on-Trent (June 4th).

Somerset.—Maesdown Farm, Evercreech, Shepton Mallet; Gooseacre, Clapton in Gordano, Nr. Bristol (June 4th).

Staffs.—Udalls Allotment, Northwood, Stoke-on-Trent; 3, Duke Street Allotment, Duke Street, Fenton; 36, Cumberland Road, West Bromwich (June 4th).

Suffolk.—The Maltings, Laxfield, Woodbridge (June 3rd); Sands Lane, Oulton Broad, Lowestoft; West End Farm, Gt. Finborough (June 5th).

Sussex.—Pig Farm, Race Hill, Brighton (June 3rd).

Warwicks.—Middle Farm, Loxley (June 4th).

Worcs.—The Cottage, Arrowfield Top, Alvechurch, Birmingham (June 3rd); Oxleasowes Farm, Tardebigge, Redditch (June 4th).

Yorks.—West Street, Leven, Nr. Hull (June 4th); Piggeries at Dolphin Street Allotments, Darnall, Sheffield (June 5th).

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SLAUGHTERHOUSE POLICY AND FAT-STOCK MARKETING

"So far the Government's only direct action in the fat-stock marketing sphere has been in the formulation of a slaughterhouse policy and, in my view (writes "Blythe" in the *Farmer & Stock-breeder*), the full significance of this in its effects upon an overall marketing policy has been missed. For a start, the fact that the pre-war number of slaughterhouses, amounting to some 15,000 to 20,000, is to be permanently reduced to between 300 and 400 means that many butchers who bought stock and killed them in their own premises will not perform this double function again. In fact, if the designs of the new Ministry of Food abattoirs, working on the flow-line principle, are followed then slaughtering will be carried out by a permanent slaughtering staff rather than by individual butchers themselves. Which is another hurdle to be overcome.

"In addition, Inter-departmental Committees have been appointed to make recommendations on the future siting and design of slaughterhouses, and it seems that these will have to go further than slaughterhouses into the field of fat-stock marketing as a whole to reach final conclusions. If, to take one example, a dead-weight and grade basis of payment for fat stock, coupled with meat rather than livestock markets, should be finally decided upon, then I imagine that both the design and the location of abattoirs would be different than would otherwise be the case. To decide on a slaughterhouse policy seems to be putting the cart before the horse. The slaughterhouse is but one port of call of fat stock as they pass from farm through to the butcher's shop, and the design and locations of these slaughterhouses will partly depend on what is to happen to animals before they arrive and what is to happen to meat after it leaves the abattoir."

"The Greater Hazard—Insects or Insecticides?"

Dr. E. F. Knipling, in his Presidential Address to the American Association of Economic Entomologists,* focused attention on the toxic hazards of the new synthetic insecticides in relation to their insecticidal efficiency. In recent years wide publicity has been given to cases of poisoning with these insecticides, while the benefits resulting from their use have been largely ignored. Dr. Knipling suggested that, for a change, the insecticides might be considered as "man-savers" rather than "man-killers."

Taking DDT as the first example, he estimated that DDT since 1942 had saved no less than 5,000,000 lives and prevented 100,000,000 illnesses by the control of malaria, typhus, dysentery and other insect-borne diseases. In particular, the use of DDT in World War II had been of immense value in protecting fighting men and civilians in the war-devastated zones from diseases transmitted by arthropods.

Chlordane is another insecticide the toxicity of which has been the target of those who stress the dangers of synthetic insecticides. Chlordane is widely used in domestic houses for the control of cockroaches and other household insect pests and has thereby prevented many cases of illness arising from food contamination.

Dr. Knipling stated that, to his knowledge, there had been no deaths or serious illnesses in man when these chemicals had been used for the routine control of insects.

Almost any insecticide may cause death under conditions of gross carelessness or when people make suicidal attempts, and in this category 14 deaths have been reported as resulting from DDT and one from chlordane. The significance of these figures, however, could be judged from the record of other commonly used chemicals. Statistics published by the Federal Security Agency for 1949 alone, recorded 117 deaths from kerosene and other petroleum products, 70 deaths from aspirin, and 466 deaths due to barbituric acid derivatives.

The modern insecticides, exemplified by DDT, chlordane and lindane (gamma isomer of BHC), are not only more effective but all are safer than the arsenicals, fluorides and cyanides, which were formerly used for the control of household pests.

Dr. Knipling considered that entomologists, conscious of their responsibility for seeing that the new insecticides were used safely, had over-emphasised the toxic hazards at the expense of the benefits derived from pest control. He drew attention to the importance and the difficulties of insect control, with particular reference to the problem of insecticide-resistant insects.

Dr. Knipling continued by reviewing the trends in research to evaluate the insecticidal activity of new chemicals. He stressed the need for co-operation and co-ordination between chemists, entomologists and toxicologists and, in particular, he emphasised that toxicological data should be specifically designed to appraise the toxic hazards of insecticides in relation to their use for controlling specific arthropods attacking man.

Dr. Knipling concluded his address by advising an expansion of toxicological research in the field of insecticides in order to educate the public in the proper and safe use of such chemicals, and to counter alarmist and ill-judged comment on toxicity.

D. W. J.

Reference

* Knipling, E. F. (1953). "The Greater Hazard—Insects or Insecticides?" *J. Ec. Ent.* **46.** (1). 1 - 7.

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EFFECT OF GROWTH IN A.I.

Views of Head of M.M.B.'s Production Division

The effect of the widespread adoption of A.I. on the size of the bull population has been to reduce the numbers of those in use from 101,000 in 1942 to 82,000 in 1952 and the numbers of those reared from 59,000 to 31,000. These figures were given by Dr. J. Edwards, head of the production division M.M.B. at the annual meeting of the Cheswardine, Shropshire, A.I. Centre.

In its report of the meeting the *Farmers' Weekly* continues: "In a few years' time, said Dr. Edwards, the bull population would be halved. The main decrease would take place among non-pedigree bulls. Over the past five years the number of licensed pedigree bulls declined from 19,800 to 18,000, while the number of non-pedigree licensed bulls was reduced from 12,500 to 5,500. Ten years ago the proportion of cattle bred to pedigree bulls was only 50 per cent.; to-day it is almost 85 per cent.

"'I do not share the concern of those who fear that the ever-growing use of A.I. will mean an undesirable degree of concentration on too few sires and blood-lines leading to inbreeding and reduced genetic flexibility and variability within our breeds,' added Dr. Edwards. 'It would take many generations of A.I. breeding in commercial herds to raise the level of inbreeding in them to that now reached in the average pedigree herd; in many of the bull-breeding herds it was much higher. It was from "cashing-in" on the inbreeding and line-breeding policies of the bull-breeding herds that some of the genetic gain might be brought about by A.I. in our commercial herds. Nor is there likely to be a loss of scope or genetic variability among our pedigree herds. The numbers of bulls reared may continue to fall, but the numbers of registrations of females show a most satisfactory position. In 1946 registrations totalled 107,300 for our five leading dairy breeds; in 1951 numbers rose to 175,000. There can be little concern for loss of breeding material with such a large base of female registered stock. And, after all, it is the female side—the superior cow family and the grand old matron in the herd—which constitutes the foundation of bull-breeding.'

Deep Frozen Semen

"Dr. Edwards went on to discuss the new development of deep-frozen semen capable of being stored for very long periods. 'It is important to remember,' he said, 'that this is a technical advance and not a new system of breeding. Naturally there is much speculation as to its possible uses, but I think that time will show how it can be fitted in with other advances made in the past.' Used in the right way, the development of deep-frozen semen should mean at least as much to the pedigree breeder as to the A.I. movement, giving him greater freedom than ever before to plan special matings in his herd."

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PROBLEMS RELATING TO GRASSLAND AND FODDER CROPS

Proceedings of Second Conference Issued as B.V.A. Handbook

With this issue of *The Veterinary Record* there is distributed to each member of the Association a copy of the proceedings of the highly successful Conference on Metabolic Disorders and Other Problems Related to Grassland and Fodder Crops and Innovations in Animal Husbandry, held at the Wellcome Foundation, London, N.W.1, on November 20th and 21st, 1952.

Any member who fails to receive his or her copy should inform the General Secretary, B.V.A., 36, Gordon Square, London, W.C.1. The edition is a limited one, but some copies are available for students, also for members of the allied sciences, on application. The price to students is 3s. 6d. post free; to others 6s. 6d. post free.

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International Pony Breeders' Federation.—The Earl of Dalkeith, President of the International Pony Breeders' Federation, which exists for the protection of native breeds of ponies, the encouragement of their use, and the advancement of knowledge of them, asks all friends of ponies to support the federation by becoming members. Donations may be addressed to the President, care of I.P.B.F., Scottish Office, 77, Rose Street, Edinburgh. An appeal to veterinary surgeons to enter into membership, with a list of zonal secretaries for Great Britain, was published in our issue of May 9th, from Major D. S. Rabagliati.

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The South African Government has prohibited the entry into the Union of products derived from any cloven-hooved animal in the Nuanetsi triangle ranch area of Southern Rhodesia, following an outbreak of foot-and-mouth disease.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

CYSTICERCUS BOVIS IN THE N'DAMA CATTLE OF SIERRA LEONE

Sir,—I would refer to Mr. Peel's most interesting article on the above subject published in *The Veterinary Record* of April 18th, 1953.

It is perhaps unfortunate that the paper was submitted for my comments only after it had been dispatched for publication.

Mr. Peel's investigations have shown fairly conclusively that

if no cattle under five years old were slaughtered the incidence of taeniasis would be reduced considerably. Whether this fact could be put to practical use at present is debatable but this in no way detracts from the usefulness of the research work accomplished.

However, I have the following criticisms to offer:—

The statement that "a certain amount of breeding does take place in Sierra Leone but most of the herds originate in French Guinea" is not quite correct. I estimate that there are almost 200,000 head of cattle in the Northern Province alone. These are breeding herds now firmly established in Sierra Leone. It is true to say that these herds originally came from French Guinea but they are now permanently settled here and provide at least 6,000 or so slaughter stock a year. About 3,000 trade cattle are still imported annually from French Guinea and also because of our relative freedom from disease more and more breeding herds are coming over to settle.

I think it is an exaggeration to say that at no time in the year is the nutritive level really adequate. I would say that during most of the year it is good. The grazing is certainly much better than very many other parts of Tropical Africa.

The Foulah cattle owners of Sierra Leone are no longer true nomads. Some of them come under the category of semi-nomads but most are settled. They do move two or three times a year, *e.g.*, up to higher land during the rains, but usually within a definite "home" area. They do not wander continually over the country in search of water and grazing like the true nomads.

With reference to the paragraph headed "Discussion," I am not sure that "the feeding habits are the same for all age groups" is correct. Calves up to a year usually spend the day quite close to the warris and I think that it is probably true to say that it is only the animals over two years old that reach grazing areas as far away as four or five miles from the home warri. This may be significant.

My most cogent criticism is regarding the statement that the Foulah tribe are heavy meat eaters. This is not so. Most Foulah consider themselves fortunate if they manage to get one meat meal a fortnight and many only manage one a month. Cattle are slaughtered only on special occasions and even these may be celebrated by killing either a sheep or goat instead, although a bull is always slaughtered if a death takes place.

If it is true that the Foulah eats meat at rather infrequent intervals it may be that other factors are concerned in the high incidence of *Cysticercus bovis* in the meat. It may be, of course, that the little bit they do get is very heavily infested and that practically every Foulah has his tape worm. It would be interesting to know the incidence of taeniasis in the tribe: it may be exceedingly high.

My observations do not necessarily reduce the value of Mr. Peel's important findings but they must be considered in any interpretation of the significance of the investigations described.—Yours faithfully, John D. Birkett, Director of Veterinary Services, the Veterinary Headquarters, Teko, via Makeni, Sierra Leone. *May 9th*, 1953.

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"MASS SHOCK PHENOMENON IN SHEEP"

Sir,—I wish to thank Mr. R. N. Phillips for his communication in your June 6th, 1953, number. It appears to me that in his discussion Mr. Phillips may have omitted to draw attention to one essential factor, namely, the predominant diet of cocksfoot.

The data he provides are analogous to a number of recorded cases which I classified in the undernoted two papers. On the basis of these papers my tentative interpretation of Mr. Phillips' data is:—

(1) the cocksfoot predominant in the diet acted as an allergen;

(2) the loss of protective coverings plus the cold and wet acted as precipitating factors;

(3) (1) and (2) in combination contributed to the production of allergic disease;

(4) recovery of many of the sheep without a period of convalescence also points to an allergic condition.

—Yours faithfully, A. Brownlee, Manor Hostel, Compton, Berks. *June 8th*, 1953.

Brownlee, A. (1940). Allergy in the Domestic Animals. *J. comp. Path.* **53.** 55.

Brownlee, A. (1941). A Contribution to the Study of Some Ecological Factors concerned in the Pathogenesis of Diseases of Domestic Animals. *Vet. J.* **97.** 366.

BOVINE INFERTILITY

Sir,—The paper (*Vet. Rec.* 1953. **65.** 335) by Messrs. Rowson, Lamming and Fry will, I am sure, have been of great interest to all, particularly to those engaged in research or clinical studies on bovine infertility. An original paper such as this on basic problems will in time do much to extend our knowledge in this wide and complex field.

I was surprised, however, by the statements in this contribution: "It is well known that cows will recover spontaneously from *Vibrio foetus* and trichomonad infection after several heats without reinfective coitus," and again in the summary: "They may explain why the cow recovers spontaneously from trichomonad and *V. foetus* infections after several heat periods without reinfective coitus."

The reference to spontaneous recovery, especially after such a short period as "several heats without reinfective coitus" infers that after this period the animals are no longer capable of transmitting infection. To the best of my knowledge, no investigations supporting this view have been reported. In fact, the reverse is the case and clinical experience of *V. foetus* infection would lead one to suppose a tolerance on the part of the animal, or a diminution of the virulence of the organism. This state has been described by Lawson & MacKinnon, B.V.A. Congress, 1952. Such a tolerance, whilst it could bring about what might be called by some a "clinical cure," does not mean that the animal is no longer infective. A return to fertility in such cases cannot be assumed as a sign of freedom (bacteriologically) from the infection. In my opinion it is in these animals that the chief danger lies, *i.e.*, infection may be present, but no symptoms are seen.

I feel, therefore, that unless the authors have experience contrary to most, in this field, the assumption of a spontaneous recovery from infection is a dangerous and misleading one.—Yours faithfully, F. Andrew Edgson, M.R.C.V.S., 50 & 51, Friar Street, Reading. *May 30th*, 1953.

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R.C.V.S. COUNCIL ELECTION

Sir,—May I express my sincere thanks to those members of the profession whose votes have given me a seat on the Council of the Royal College. I am, frankly, both surprised and touched by the generous support afforded me. I can but say that I will do my utmost to deserve this confidence.

That this, the first representation of women on our governing body, should coincide with a period of national rejoicing in our new Elizabethan era enhances for me the pleasure I feel in my election.—Yours faithfully, Joan O. Joshua, 78, Brestway, Finchley, N.3. *June 6th*, 1953.

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Sir,—I shall be obliged if you will grant me the courtesy of your column to thank all those who saw fit to vote for me in the recent election for Council R.C.V.S.

Their support in this way was most gratifying and greatly appreciated.—Yours faithfully, W. T. Rowlands, Argoed, Up Garth Road, Bangor, N. Wales. *June 6th*, 1953.

DISEASES OF ANIMALS ACT, 1950—GREAT BRITAIN

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period	Anthrax	Foot-and-mouth	Fowl Pest	Sheep Scab	Swine Fever
1st to 15th May, 1953	28	—	37	—	251
Corresponding period in—1952	44	86	6	—	57
1951	26	1	6	—	36
1950	13	—	1	—	—
1st January to 15th May, 1953 ...	378	25	247	—	1,269
Corresponding period in—1952	218	201	106	1	455
1951	220	18	463	4	316
1950	168	12	70	19	2